

**REMARKS**

The undersigned thanks Examiner Cherry for a telephone conference with the undersigned on June 7 to discuss the requirements for making this Amendment responsive. The examiner's recommendation of substituting new claims and presenting arguments has been followed.

In response to the Office Action mailed May 9, 2006, Applicants respectfully request reconsideration. Claims 27-36, previously withdrawn by the Examiner in the Office Action dated October 18, 2005, have been cancelled. New claims 37-46 have now been added. As a result, claims 37-46 are pending for examination with claim 37 being independent. The application is believed to be in condition for allowance.

**Summary of Prosecution History**

The Office Action found the response dated July 25, 2005, to be non-responsive. Claims 27-36 had been withdrawn in the Office Action dated October 18, 2005 as being directed to an invention that is independent or distinct from the invention originally claimed. Applicants submitted a response dated January 18, 2006 amending withdrawn claim 27 for the purposes of clarity. The Office Action dated May 9, 2006, deemed the response of January 18, 2006, as being non-responsive for failing to reflect the correct status of the claims; and for failing to point out the features of the claims, as intended to be amended, which distinguish over the prior art of record. Applicants hereby submit new claims 37-46, with claim 37 comprising the amendment previously made to claim 27. The new listing of claims also reflects the correct new status (cancelled) of claims 27-36. It is also submitted that the new claims 37-46 should be considered as reciting the elected invention.

**Claims Currently Presented are Not Distinct from the Invention Originally Claimed**

The Office Action dated October 18, 2006, asserts that the limitation of a baseline condition from an eddy current sensor had been omitted and a limitation of performing future inspections has been added. Applicants respectfully disagree.

Applicants respectfully direct attention to claim 27 as originally filed. Claim 27 originally stated "*establishing a baseline condition for future inspections with another*

*examination of the article with the eddy current sensor.”* Thus contrary to the Office Action assertion, the limitation of performing future inspections was included in the claim as originally filed and has not been added by amendment.

In regard to the objection on the grounds that the limitation of the baseline condition from an eddy current sensor has been omitted, although Applicants do not agree with this objection, claim 27 was amended, in the response dated January 18, 2006, for purposes of clarity. Newly submitted claim 37 comprises all of the limitations of amended withdrawn claim 27. Newly added claim 37 states “*with the eddy current sensor, performing future inspections that use this baseline condition for comparison to make decisions based on article health.*” Thus, Applicants respectfully assert claim 37 comprises the limitation of a baseline condition from an eddy current sensor. New claims 38-46 depend from claim 37 and therefore comprise the above limitation as well. Accordingly, withdrawal of this objection and examination of claims 37-46 is respectfully requested.

#### The Claims as Currently Presented Patentably Distinguish the Prior Art of Record

Claims 27, 31 and 32 were previously rejected under 35 U.S.C. § 103(a) as being unpatentable over James (US Patent Application Publication No. US 2002/0066770) in view of Rogel (US Patent No. 3,718,855). The Office Action also rejected Claims 27-30 and 32-33 under 35 U.S.C. § 103(a) as being unpatentable over Floret (U.S. Patent No. 5,406,500) in view of Staver. These rejections, as applied to new claims 37-46, are respectfully traversed and reconsideration is requested.

#### Discussion of the Rejection Based on James in view of Rogel:

James addresses repair of engine components using a cold spray process. The process requires identifying a discontinuity, such as a crack, notch, or pit, and performing a repair action, such as cold spray depositing another material onto the surface, excavating the discontinuity, or attaching a replacement material to the surface. James does not teach or suggest inspecting *after* the repair action is completed, since the discontinuity is removed, or of using an absolute electrical property for the material condition assessment. Nor does it teach that this repair action

is a part of a framework for maintaining reliable operation of the component throughout the service life of the component as part of a damage tolerance framework.

Rogel teaches an eddy current-based system for flaw detection in holes. The system includes a rotating probe that scans the internal surface of the hole in prescribed increments and records each complete probe rotation. It also incorporates a notched reference standard as part of the probe housing which is aimed at improving measurement repeatability for comparison with future measurements. However, this comparison is relative to the signal from the notch and requires the same type of notch (e.g., notch size) for future comparisons. Rogel does not teach or suggest that the baseline information can be absolute electrical property values.

Furthermore, neither Rogel alone, nor the combination of James and Rogel teach or suggest, “*after the health control action is complete or if no early stage damage is detected, establishing a baseline condition for an absolute electrical property*”; and with the eddy current sensor, performing future inspections that use this baseline condition for comparison to make decisions based on article health,” as is required by claim 37. Therefore, Claims 37-46 are not rendered obvious by the combination of James and Rogel, and the rejection should be withdrawn.

Discussion of the Rejection Based on Floret in view of Staver:

Floret discusses an automated device for nondestructive testing and inspection of structures. The device uses a probe, such as an eddy current probe, to scan over the material surface to inspect for cracks. Floret does not teach or suggest *using absolute electrical property values for creating the baseline property information*.

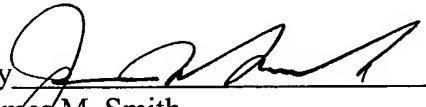
Even though shot or shock peening, for example, as described in Staver, is commonly used as a health control action to create compressive residual stresses at a material surface, the combination of Floret and Staver does not teach inspecting *after the repair action is completed* or that this repair action is a part of a framework for maintaining reliable operation of the component throughout the service life of the component as part of a damage tolerance framework. Therefore, Claims 37-46 are not obvious in view of the combination of Floret and Staver. All claims are now believed to be in condition for allowance.

**CONCLUSION**

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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